

We claim:

1. An elastic assembly for absorbent garments comprising:
 - a first carrier layer;
 - a second carrier layer;
 - an elastic layer attached between the first and second carrier layers to impart elasticity to an elasticized portion of the elastic assembly, the elastic layer comprising elastic strands having a decitex of about 600 or less, the elastic strands being arranged generally in parallel with one another and with a spacing of about 1 to about 10 elastic strands per centimeter;
 - wherein the elasticized portion, when in an elastically relaxed state, has a thickness of about 2.6 mm or less at a pressure of 0.05 p.s.i.;
 - wherein the elasticized portion, when in an elastically relaxed state, has about 8 or more corrugations per centimeter; and
 - wherein the first and second carrier layers are attached to one another in the elasticized portion substantially only by a coating of adhesive on the elastic strands.
2. The elastic assembly of claim 1, wherein the coating of adhesive comprises about 0.0180 grams or less of adhesive per linear meter of each elastic strand.
3. The elastic assembly of claim 1, wherein the coating of adhesive comprises about 0.0121 grams or less of adhesive per linear meter of each elastic strand.
4. The elastic assembly of claim 1, wherein the elastic assembly has a width of about 8 cm to about 30 cm and the elastic strands comprise about 8 to about 300 elastic strands.
5. The elastic assembly of claim 1, wherein the elastic assembly has a width of about 12 cm and the elastic strands comprise about 49 elastic strands.
6. The elastic assembly of claim 1, wherein the first and second carrier layers each comprise a nonwoven material having a basis weight of less than about 20 gsm or less.
7. The elastic assembly of claim 1, wherein the first and second carrier layers each comprise a nonwoven material having a basis weight of less than about 13.5 gsm or less.

8. The elastic assembly of claim 1, wherein the elasticized portion, when in an elastically relaxed state, has a thickness of about 2.2 mm or less at a pressure of 0.12 p.s.i.
9. The elastic assembly of claim 1, wherein the elastic strands are extended to about 2 times to about 4 times their relaxed length when the elastic layer is attached between the first and second carrier layers.
10. The elastic assembly of claim 1, wherein the elastic strands are extended to about 3.5 times their relaxed length when the elastic layer is attached between the first and second carrier layers.
11. The elastic assembly of claim 1, wherein the elastic strands have a decitex of about 220 or less.
12. The elastic assembly of claim 1, wherein the elastic strands have a spacing of about 4 strands per centimeter.
13. The elastic assembly of claim 1, wherein:
 - the elasticized portion comprises:
 - a first elasticized region in which a first portion of the elastic layer is located; and
 - a second elasticized region in which a second portion of the elastic layer is located; and
 - wherein the elastic assembly further comprises an inelastic region, located between the first and second elasticized regions, in which a third portion of the elastic layer is located between and substantially unattached to the first and second carrier layers and severed, such that the third portion of the elastic layer does not impart substantial elasticity to the elastic assembly in the inelastic region.
14. The elastic assembly of claim 13, wherein the third portion of the elastic layer is severed by an ultrasonic bond, a heat bond or a mechanical bond in the inelastic region.
15. The elastic assembly of claim 13, wherein the third portion of the elastic layer is severed by a one-dimensional pattern of cuts in the inelastic region.

16. The elastic assembly of claim 13, wherein the third portion of the elastic layer is severed by a two-dimensional pattern of cuts in the inelastic region.
17. The elastic assembly of claim 16, wherein the first and second carrier layers are bonded to one another at substantially each cut.
18. The elastic assembly of claim 1, wherein the elastic assembly is attached to an article chosen from the group consisting of: a baby training pant, a baby diaper and an adult incontinent product.
19. An absorbent garment comprising:
 - a first waist region;
 - a second waist region;
 - a crotch region extending between the first and second waist regions;
 - a core assembly located at least partially within the crotch region, the core assembly comprising a substantially fluid-pervious body-facing topsheet, a substantially fluid-impervious backsheet and an absorbent core between the topsheet and the backsheet;
 - at least one elastic assembly located in at least one of the first waist region and second waist region, the at least one elastic assembly comprising:
 - a first carrier layer;
 - a second carrier layer;
 - an elastic layer attached between the first and second carrier layers to impart elasticity to an elasticized portion of the garment, the elastic layer comprising elastic strands having a decitex of about 600 or less, the elastic strands being arranged generally in parallel with one another and with a spacing of about 1 to about 10 elastic strands per centimeter;
 - wherein the elasticized portion, when in an elastically relaxed state, has a thickness of about 3.6 mm or less at a pressure of 0.05 p.s.i.;
 - wherein the elasticized portion, when in an elastically relaxed state, has about 8 or more corrugations per centimeter; and

wherein the first and second carrier layers are attached to one another in the elasticized portion substantially only by a coating of adhesive on the elastic strands.

20. The absorbent garment of claim 19, wherein the coating of adhesive comprises about 0.0180 grams or less of adhesive per linear meter of each elastic strand.
21. The absorbent garment of claim 19, wherein the coating of adhesive comprises about 0.0121 grams or less of adhesive per linear meter of each elastic strand.
22. The absorbent garment of claim 19, wherein the at least one elastic assembly has a width of about 8 cm to about 30 cm and the elastic strands comprise about 8 to about 300 elastic strands.
23. The absorbent garment of claim 19, wherein the at least one elastic assembly has a width of about 12 cm and the elastic strands comprise about 49 elastic strands.
24. The absorbent garment of claim 19, wherein the first and second carrier layers each have a basis weight of less than about 20 gsm.
25. The absorbent garment of claim 19, wherein the first and second carrier layers each have a basis weight of less than about 13.5 gsm.
26. The absorbent garment of claims 19, wherein the elasticized portion, when in an elastically relaxed state, has a thickness of about 3.2 mm or less at a pressure of 0.12 p.s.i.
27. The absorbent garment of claim 19, wherein the elastic strands are extended to about 2 times to about 4 times their relaxed length when the elastic layer is attached between the first and second carrier layers.
28. The absorbent garment of claim 19, wherein the elastic strands are extended to about 3.5 times their relaxed length when the elastic layer is attached between the first and second carrier layers.
29. The absorbent garment of claim 19, wherein the elastic strands have a decitex of about 220 or less.
30. The absorbent garment of claim 19, wherein the elastic strands have a spacing of about 4 strands per centimeter.

31. The absorbent garment of claim 19, wherein the garment has a total contracting force of about 3,500 grams to about 4,100 grams.
32. The absorbent garment of claim 19, wherein the garment has a total contracting force of about 3,850 grams.
33. The absorbent garment of claim 19, wherein:
the elasticized portion comprises:
a first elasticized region in which a first portion of the elastic layer is located; and
a second elasticized region in which a second portion of the elastic layer is located; and
wherein the at least one elastic assembly further comprises an inelastic region, located between the first and second elasticized regions, in which a third portion of the elastic layer is located between and substantially unattached to the first and second carrier layers and severed, such that the third portion of the elastic layer does not impart substantial elasticity to the at least one elastic assembly in the inelastic region.
34. The absorbent garment of claim 33, wherein the third portion of the elastic layer is severed by an ultrasonic bond, a heat bond or a mechanical bond in the inelastic region.
35. The absorbent garment of claim 33, wherein the third portion of the elastic layer is severed by a one-dimensional pattern of cuts in the inelastic region.
36. The absorbent garment of claim 33, wherein the third portion of the elastic layer is severed by a two-dimensional pattern of cuts in the inelastic region.
37. The absorbent garment of claim 36, wherein the first and second carrier layers are bonded to one another at substantially each cut.
38. The absorbent garment of claim 19, wherein the absorbent garment is an article chosen from the group consisting of: a baby training pant, a baby diaper and an adult incontinent product.
39. An absorbent garment comprising:

a chassis layer having a first waist region, a second waist region and a crotch region extending between the first and second waist regions, the crotch region being laterally narrower than the first and second waist regions;

a core assembly attached at least partially within the crotch region to an inward-facing side of the chassis layer, the core assembly comprising a substantially fluid-pervious body-facing topsheet, a substantially fluid-impervious backsheet and an absorbent core between the topsheet and the backsheet;

at least one elastic assembly, each elastic assembly comprising:

- a first carrier layer;

- a second carrier layer;

- a first elastic layer portion located at a first end of the elastic assembly and attached between the first and second carrier layers to impart elasticity to a first elasticized portion of the elastic assembly;

- a second elastic layer portion located at a second end of the elastic assembly and attached between the first and second carrier layers to impart elasticity to a second elasticized portion of the elastic assembly; and

- a substantially inelastic region located between the first and second elasticized portions;

wherein the first and second elastic layer portions each comprise elastic strands having a decitex of about 600 or less, the elastic strands being arranged generally in parallel with one another and with a spacing of about 1 to about 10 elastic strands per centimeter;

wherein the first and second carrier layers are attached to one another in the first and second elasticized portions, respectively, substantially only by a coating of adhesive on the elastic strands;

wherein the at least one elastic assembly is attached to an inward facing side of the chassis layer in the first waist region such that the first elasticized portion overlaps a first lateral side of the first waist region and the second elasticized portion overlaps a second lateral side of the first waist region;

wherein the combined thickness of the first elasticized portion and the chassis layer is about 3.6 mm or less at a pressure of 0.05 p.s.i., when in an elastically relaxed state, and the combined thickness of the second elasticized portion and the chassis layer is about 3.6 mm or less at a pressure of 0.05 p.s.i., when in an elastically relaxed state;

wherein a body-facing side of each of the first and second elasticized portions has about 8 or more corrugations per centimeter, when in an elastically relaxed state.

40. The absorbent garment of claim 39, wherein the coating of adhesive comprises about 0.0180 grams or less of adhesive per linear meter of each elastic strand.

41. The absorbent garment of claim 39, wherein the coating of adhesive comprises about 0.0121 grams or less of adhesive per linear meter of each elastic strand.

42. The absorbent garment of claim 39, wherein the at least one elastic assembly has a width of about 8 cm to about 30 cm and wherein the first and second elastic layer portions each comprise about 8 to about 300 elastic strands.

43. The absorbent garment of claim 39, wherein the at least one elastic assembly has a width of about 12 cm and wherein the first and second elastic layer portions each comprise about 49 elastic strands.

44. The absorbent garment of claim 39, wherein the first and second carrier layers each have a basis weight of less than about 20 gsm.

45. The absorbent garment of claim 39, wherein the first and second carrier layers each have a basis weight of less than about 13.5 gsm.

46. The absorbent garment of claim 39, wherein the combined thickness of the first elasticized portion and the chassis layer is about 3.2 mm or less at a pressure of .012 p.s.i., when in an elastically relaxed state, and the combined thickness of the second elasticized portion and the chassis layer is about 3.2 mm or less at a pressure of 0.12 p.s.i., when in an elastically relaxed state.

47. The absorbent garment of claim 39, wherein the elastic strands of the first elastic layer portion and the elastic strands of the second elastic layer portion are each

extended to about 2 times to about 4 times their relaxed length when attached between the first and second carrier layers.

48. The absorbent garment of claim 39, wherein the elastic strands of the first elastic layer portion and the elastic strands of the second elastic layer portion are each extended to about 3.5 times their relaxed length when attached between the first and second carrier layers.

49. The absorbent garment of claim 39, wherein the elastic strands have a decitex of about 220 or less.

50. The absorbent garment of claim 39, wherein the elastic strands have a spacing of about 4 strands per centimeter.

51. The absorbent garment of claim 39, wherein the garment has a total contracting force of about 3,500 grams to about 4,100 grams.

52. The absorbent garment of claim 39, wherein the garment has a total contracting force of about 3,850 grams.

53. The absorbent garment of claim 39, wherein the at least one elastic assembly is attached to the chassis layer by about 4.50 gsm or less of adhesive.

54. The absorbent garment of claim 39, wherein the at least one elastic assembly is attached to the chassis layer by a continuous meltblown fiber pattern of hot melt adhesive.

55. The absorbent garment of claim 39, further comprising:

a second elastic assembly comprising:

a third carrier layer;

a fourth carrier layer;

a third elastic layer portion attached between the third and fourth carrier layers to impart elasticity to one or more elasticized portions of the second elastic assembly; and

wherein the second elastic assembly is attached to an inward facing side of the chassis layer in the second waist region.

56. The absorbent garment of claim 39, wherein the combined structure of the first elasticized portion and the chassis layer, and the combined structure of the second elasticized portion and the chassis layer, each have about 10 or more corrugations per centimeter on an outside-facing surface thereof.
57. The absorbent garment of claim 39, wherein the absorbent garment is an article chosen from the group consisting of: a baby training pant, a baby diaper and an adult incontinent product.
58. A method for forming an elastic assembly, the method comprising:
extending one or more elastic strands;
coating the one or more elastic strands with adhesive in a first zone;
not coating the one or more elastic strands with adhesive in a second zone;
coating the one or more elastic strands with adhesive in a third zone;
sandwiching the one or more elastic strands between a first carrier layer and a second carrier layer to thereby form an elasticized laminate having a first glued zone corresponding to the first zone, an unglued zone corresponding to the second zone, and a second glued zone corresponding to the third zone;
severing the one or more elastic strands with a two-dimensional pattern of cuts in the unglued zone;
bonding the first carrier layer and second carrier layer together in the unglued zone at substantially all of the cuts; and
wherein the severing step and the bonding step occur substantially simultaneously.
59. The method of claim 58, wherein the coating steps comprise coating the one or more elastic strands with about 0.0180 grams or less of adhesive per linear meter of each elastic strand.
60. The method of claim 58, wherein the coating steps comprise coating the one or more elastic strands with about 0.0121 grams or less of adhesive per linear meter of each elastic strand.

61. The method of claim 58, wherein the first carrier layer and the second carrier layer each have a width of about 8 cm to about 30 cm and the one or more elastic strands comprise about 8 to about 300 elastic strands.
62. The method of claim 58, wherein the first carrier layer and the second carrier layer each have a width of about 12 cm and the one or more elastic strands comprise about 49 elastic strands.
63. The method of claim 58, wherein the first carrier layer and the second carrier layer each comprise a nonwoven material having a basis weight of less than about 20 gsm or less.
64. The method of claim 58, wherein the first carrier layer and the second carrier layer each comprise a nonwoven material having a basis weight of less than about 13.5 gsm or less.
65. The method of claim 58, wherein the first glued zone and the second glued zone, when in an elastically relaxed state, each have a thickness of about 2.2 mm or less at a pressure of 0.12 p.s.i.
66. The method of claim 58, wherein the extending step comprises extending the one or more elastic strands to about 2 times to about 4 times their relaxed length.
67. The method of claim 58, wherein the extending step comprises extending the one or more elastic strands to about 3.5 times their relaxed length.
68. The method of claim 58, wherein the one or more elastic strands have a decitex of about 600 or less.
69. The method of claim 58, wherein the one or more elastic strands have a decitex of about 220 or less.
70. The method of claim 58, wherein the one or more elastic strands comprise two or more elastic strands having a spacing of about 1 to about 10 strands per centimeter.
71. The method of claim 58, wherein the one or more elastic strands comprise two or more elastic strands having a spacing of about 4 strands per centimeter.

72. The method of claim 58 wherein the first glued zone and the second glued zone, when in an elastically relaxed state, each have about 8 or more corrugations per centimeter.

73. An elastic assembly manufactured according to the method of claim 58

74. An absorbent garment comprising one or more elastic assemblies manufactured according to the method of claim 58

75. The absorbent garment of claim 74, wherein the absorbent garment is an article chosen from the group consisting of: a baby training pant, a baby diaper and an adult incontinent product.